THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

Direct Testimony

of

KEITH W. BOSSUNG

In the Matter of the Revision of Rates

Filed by

Massachusetts-American Water Company

DTE _____

November 16, 2000

1. Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Keith W. Bossung, and my business address is 200 Cordwainer Drive, Suite 200, Norwell, Massachusetts 02061.

2. Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by American Water Works Service Company, Inc. ("AWWSC") as Vice President and Manager for Massachusetts-American Water Company ("Company" or "MAWC"), Hampton Water Works Company and Salisbury Water Supply Company.

3. Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

A. I am a 1972 graduate of Ball State University, Muncie, Indiana, where I received a Bachelor of Science Degree in Secondary Education - English and Speech.

4. Q. WHAT IS YOUR BUSINESS EXPERIENCE?

A. I have been employed by the American Water Works System ("American") since 1973. I have filled several supervisory positions, including Customer Service Superintendent and Operations Manager with American's Richmond, Indiana operating district through 1981. I was then appointed Manager for American's newly acquired

Seymour Water Company later to be called the Seymour District of Indiana-American Water Company. In 1989, I was transferred to Hampton Water Works Company to serve as Manager. In April of 1994, I became Regional Manager-Operating Services of the New England Companies of the American Water Works Service Company. I was also elected Vice President, Operations for the Massachusetts-American Water Company, Hampton Water Works Company, the Salisbury Water Supply Company, the Connecticut-American Water Company and the New York-American Water Company. In June 1998, I was assigned my current position of Vice President and Manager of the three Massachusetts and New Hampshire Companies.

5. Q. WHAT PROFESSIONAL AFFILIATIONS DO YOU HAVE?

A. I am an active member of the American Water Works Association and through Company membership am associated with the National Association of Water Companies, New England Water Works Association, and the New Hampshire Water Works Association, the latter of which I ultimately served as its President in 1997.

6. Q. HAVE YOU EVER TESTIFIED ON BEHALF OF A REGULATED UTILITY?

A Yes, I have testified before the Massachusetts Department of Public Utilities in rate cases involving the Salisbury Water Supply Company and the Massachusetts-American Water Company. I have also testified before the New Hampshire Public Utilities Commission on behalf of Hampton Water Works Company on rate matters, as well as water resource matters and I have testified in an Indiana-American Water Company rate case.

7. Q. ARE YOU FAMILIAR WITH THE FACILITIES, OPERATIONS AND CAPITAL INVESTMENTS OF MASSACHUSETTS-AMERICAN WATER COMPANY?

A. Yes. Since April 1994, at which time I became Manager of Operating Services or the Massachusetts-American Water Company, I became quite familiar with all aspects and phases of the Company's operation. I regularly reviewed operational and financial reports prepared for internal use and for submission to regulatory agencies and take all such action as appropriate to assure the proper level of service to the Company's customers. Since June of 1998, my responsibilities as Vice President and Manager of Massachusetts-American Water Company are such that I remain involved in the operations of the Company, providing daily assistance, if needed, with direction of the Company to the Company's "on site" Operations Manager and Operations Superintendent and Supervisors. Maintaining close communication with the Operations Management Team, including frequent site visits, has afforded me continued familiarity with all facets of Massachusetts-American's operation.

8. Q. MR. BOSSUNG, PLEASE STATE THE PURPOSE OF YOUR TESTIMONY.

A. I will provide a general overview of the operations of Massachusetts-American Water Company including a summary of major issues and changes that Massachusetts-American Water Company has experienced since the last rate filing. I will also discuss the Company's capital investment projects, construction and maintenance programs, as well as changes in the corporate organization, the work force and the administration of the Company.

9. Q. PLEASE PROVIDE AN OVERVIEW OF MASSACHUSETTS-AMERICAN WATER COMPANY.

A. The Massachusetts-American Water Company water systems serve six communities in the Commonwealth of Massachusetts: the Towns of Hingham and Hull, as well as a portion of Norwell in Plymouth County, the Northern section of the Town of Cohasset in Norfolk County and the towns of Millbury and Oxford in Worcester County. A total of approximately 17,400 customers are served utilizing 30 full time

Massachusetts-American associates, as well as associates of American Water Works Service Company.

South Shore/Hingham District

The Towns of Hingham, Hull, Cohasset and Norwell cover an area of approximately 27 square miles and form a part of the South Shore of Boston Harbor. Massachusetts-American Water Company provides all facets of water service to approximately 11,800 customers in these four communities. The Company obtains its water supply from the Weir River Basin water shed employing seven ground water wells and surface water from the Accord Pond and Accord Brook. All supplies, except the Downing Street Well, are further treated and filtered by the 7.7 million gallon per day G.W. Johnstone Treatment Facility located in Hingham. A total 1999 water withdrawal of approximately 1.258 billion gallons was pumped to the 180 miles of distribution water mains and the Company's three distribution storage facilities with a total capacity of 3.25 million gallons. Emergency interconnections exist with the water systems serving the Town of Weymouth and the Town of Cohasset.

Millbury District

The Town of Millbury covers approximately 22 square miles of territory in which Massachusetts-American Water Company-Millbury District serves approximately 3,100 customers. The Blackstone River Basin water shed provides supply for the Company's four groundwater supplies. A 1999 total of approximately 612 million gallons of water were withdrawn and 4 million gallons were purchased from the City of Worcester through two metered interconnections. Approximately 46 miles of water main and the 1.5 million gallon Burbank Distribution Storage Reservoir were utilized to serve the general and fire protection needs of the Company's customers. In addition to the City of Worcester interconnections, the Millbury District also has an emergency interconnection with the Town of Grafton.

Oxford District

Serving 20 square miles of the Town of Oxford, Massachusetts-American Water Company obtains the water supply from the French River Basin water shed utilizing three ground water wells. Massachusetts-American Water Company - Oxford District produced 278 million gallons in 1999. Over 39 miles of water main was used to distribute the water to the 2,400 customers. The Company utilizes its 215,000 gallon distribution storage tank in conjunction with the use of the new 250,000 gallon Pioneer Park tank that the Company leases from the Town of Oxford. The Oxford District does not have interconnections with abutting towns.

10. Q. IS THE COMPANY ADDRESSING ANY UNIQUE ISSUES IN THIS PROPOSED RATE REQUEST FILING?

A. Yes, Massachusetts-American Water Company's Hingham district has been addressing a source of supply issue that culminated in its exceedance in 1998 of its permitted withdrawal limits regulated by the Massachusetts Department of Environmental Protection (DEP). The Company entered into an Administrative Consent Order (ACO) with the DEP wherein the Company agreed to certain programs in the areas of supply development, demand management, water conservation and unaccounted-for-water reduction. These programs are discussed in detail by Steven J. Tambini in testimony filed as a portion of this case.

In addition, Massachusetts-American Water Company embarked on a unique public/private partnership with the Town of Oxford wherein the Town of Oxford constructed a 250,000 gallon distribution storage tank and related 12-inch transmission main funded through a combination of private industry funding and

Federal Government grants. Through a long term lease, the Company's distribution system storage has been enhanced bolstering its ability to serve during fire protection emergencies, as well as providing further reliability of fire protection storage. The project also expanded the Town of Oxford's industrial/commercial base.

11. Q. ARE THERE ANY OTHER UNIQUE ISSUES OR CHANGES EXPERIENCED BY MASSACHUSETTS-AMERICAN WATER COMPANY SINCE THE LAST RATE FILING?

A. Yes, since Massachusetts-American Water Company last filed a rate case in 1995, the overall responsibility for the Company has been transferred from the New England Companies administrative and functional office located in Hingham, MA to the North East Region organization located in Haddon Heights, New Jersey. The President of Massachusetts-American Water Company is Mr. Robert Gallo. I am Vice President and Manager of the Company and am located in the Company's new office location in Norwell, MA. Mr. Gallo, his senior staff and I are all employed by AWWSC.

In addition, the Company, in its effort to continually maximize efficiencies and economies of scale, has reduced its work force from 41 associates to 30 full time associates as filed in this case. A major contributing factor to the work force reduction is the transferring of customer call service, accounting, accounts payable and payroll to the service company and to other American Water Works System entities such as New York-American Water Company and New Jersey-American Water Company.

12. Q. HAVE THERE BEEN OTHER CHANGES MORE SPECIFICALLY RELATED TO WATER QUALITY AND SAFETY?

A. Yes, in connection with the Hingham District, the George W. Johnstone Water Treatment Facility was placed in service in April 1996. As a result, the quality of the water introduced into the distribution system has been improved dramatically. The levels of iron and manganese experienced in the Hingham Source water have been reduced. Color problems normally experienced in spring and fall have been eliminated. In addition, the George W. Johnstone Water Treatment Facility filters have provided an additional barrier to help protect against the transmission of organisms such as giardia and cryptosporidium. The turbidity of the plant filter effluent has been routinely reduced to less than 0.1 turbidity units, well below the Federal Safe Drinking Water Act Standard of 1.0 turbidity unit.

Finally, through the Company's intense 1996/1997 water main flushing efforts, the entire 180 miles of distribution water main were purged of iron and manganese particulate build up. Since the initial 1996/1997 flushing program, several areas of the system have again been flushed, the most recent being this fall's flushing of the 24"-12" transmission mains from the George W. Johnstone Water Treatment Facility to the tip of Hull. A program of water main flushing will continue annually in all three districts of Massachusetts-American Water Company.

13. Q. ARE THERE ANY OTHER UNIQUE PROGRAMS, THE COST OF WHICH ARE INCLUDED IN THIS RATE FILING?

A. Yes, at the request of the Hingham Conservation Commission as a condition to obtaining permits for a dam refurbishment project and a pipeline replacement project at Accord Pond, Massachusetts-American Water Company's Hingham District is conducting a stream and wetlands environmental monitoring plan designed to evaluate the impact, if any, of the Company's source water withdrawal on the water resources and wetlands located within the Weir River Basin. This monitoring program will incorporate monthly water level readings of numerous monitoring wells and stations and quarterly evaluations of vegetative wetlands with periodic analysis reports. These reports will be reviewed with the Town of Hingham Conservation Commission. The annual estimated cost of this monitoring program is $25,000.

14. Q. MR. BOSSUNG, FROM YOUR PERSPECTIVE, WHAT IS THE DRIVING FACTOR NECESSITATING MASSACHUSETTS-AMERICAN WATER COMPANY'S FILING FOR AN INCREASE IN WATER RATES?

A. Massachusetts-American Water Company has committed to the provision of reliable, quality water supply and service to its customers at the lowest possible price while maintaining a fair return on their investment to its shareholders. Since the Company's last rate order in 1996, over $5.6 million has been incurred in additions to its utility plant. This, in addition to the post-test year construction proposed in this case results in an increase of approximately 33% in the overall plant investment level, which is necessary to replace aging infrastructure and outdated technology, as well as to maintain service in the growing communities that the Company serves.

Massachusetts-American Water Company currently has several capital improvement projects amounting to over $2.3 million that are in the process of being completed and will be in service prior to the effective date of new rates in this proceeding. The committed construction projects, combined with the plant additions since the last rate order, total over $8 million of the current adjusted total utility plant of $32,483,240. Since these plant additions have been realized for the benefit of servicing the Company's customers, it is appropriate that they be recognized in the final adjusted water rates.

15. Q. CAN YOU PLEASE DESCRIBE SOME OF THE SIGNIFICANT CONSTRUCTION PROJECTS INCORPORATING THE $5.6 MILLION IN ADDITIONAL UTILITY PLANT?

A. Yes. Significant improvements amounting to over $2.1 million were made to the Company's distribution system, service lines and meters. In addition, transportation, general equipment, office equipment and building/pumping equipment improvements totaling approximately $1.1 million were invested since the 1996 rate order.

Approximately $1.4 million in improvements to the Hingham District Fulling Mill pump station, distributive piping and the Accord Pond raw water facilities were experienced as well as the construction of a booster station to enhance flows and pressures in the Town of Hull.

An Aluminum geodesic dome roof was installed on Millbury's 1.5 million gallon Burbank Reservoir. This $300,000 roof replaced a deteriorated wooden roof and has proven to be instrumental in maintaining the bacteriological quality of the district's distribution system water storage.

The chemical feed equipment servicing the four ground water wells in Millbury and the three wells in Oxford required updating in order to be in compliance with Company engineering and safety standards. As a result, chemical spill alarms, chlorine and pH analyzers were installed, new chemical feed pumps and controls, as well as day tanks and containment areas constructed. The total effect to utility plant of this project was over $380,000.

Finally, in order to conform with the Y2K issue, personal computers and related software were either updated or replaced. In addition, to enhance internal communication as well as communication with the call center and with functional services, a wide area network utilizing Lotus Notes was employed at the same time as the Y2K issues were being resolved. The Company investment in this communications project was $350,000.

16. Q. ARE THERE OTHER CAPITAL PROJECTS THAT ARE INCLUDED IN THIS CASE?

A. Yes, the following detail is supported by a workpaper which highlights investments in utility plant that are post test year additions:

Accord Dam Improvements - $400,000

Hingham District Accord Pond Dam improvement project is a project in which the dam spillway originally constructed in the late 1800's is being refurbished in order to provide adequate overflow capacity. In addition, the dam embankment is being stabilized to maintain the integrity of the dam structure. A 1994 US Corp. of Engineer Phase I Dam Inspection report noted see page at the downstream toe of the dam and erosion in several areas. This project addresses these safety issues while securing the integrity of the Accord Pond Water Supply.

Comprehensive Planning Study - $385,000

The Comprehensive Planning Study (CPS) for all three Massachusetts-American Water Company districts will evaluate the MAWC utility plant facilities. The study will recommend the design and installation of any source of supply, production or distribution facility improvements necessary to ensure that the Company continues to provide safe, adequate and reliable service to its customers. MAWC was last studied in 1985. This study will include the update and enhancement of the distribution system computer model. The model will reflect current demand conditions and distribution system configuration. The calibrated model will then be developed for use with CYBERNET analysis program.

The Hingham service area is currently under an Administrative Consent Order (ACO) from the Massachusetts Department of Environmental Protection (DEP) because source withdrawal in 1998 exceeded the daily average withdrawal limits by approximately 26,000 GPD. Included under this project is development of a water resource management plan that will meet specific conditions of the ACO. This will involve the development and submittal of formal program plans for demand management, metering management, drought response and unaccounted-for-water control. The demand management and forecast results of the water management plan will be used in coordination with the CPS for future source of supply recommendations.

Blackstone River Crossing - $311,000

As a result of the Commonwealth of Massachusetts Highway Department Route 146 Connector Project in Millbury, the Massachusetts Highway Department is relocating and replacing the bridge that carries the Company's existing 12-inch water main.

This 12-inch main is the only source of water across the Blackstone River in this area of Millbury. Therefore, the existing 12-inch main is being replaced with new water main being installed on the new bridge. The Massachusetts Highway Department is not required to reimburse the Company for this work in accordance with the Utility Accommodation Policy of the Commonwealth of Massachusetts. Thus, the $311,000 main replacement project is included in this rate proceeding.

Replacement Well #5 - $195,000

Hingham District's Free Street Well No. 3 was constructed in 1967. The initial yield of the well was about 600 GPM. The yield of the well has steadily declined over the years and the current rated yield is about 160 GPM. Efforts in 1998 to redevelop the well were unsuccessful. Thus, a new well (No. 5) will be installed to replace Well No. 3.

The Commonwealth of Massachusetts Department of Environmental Protection will allow a replacement well to be drilled in place of an existing well if the proposed new well is drilled within 50 feet of the old well. The site conditions at Free Street allow for the new replacement well to be drilled such that it will meet the state's replacement well criteria. The existing Well No. 3 is to be kept in service as a standby well, since it is connected directly to an auxiliary power source.

Purchase of Former Leased Vehicles ($40,067) and Replacement Vehicles ($100,000)

Eight service trucks/vans and three automobiles formerly leased by the Company were purchased from the leasing company at a total buyout cost of $40,067. The lease costs associated with these vehicles have been removed from this case. In addition, three service vehicles and one utility truck are being purchased to replace other existing lease vehicles, the lease cost of which is also not included in this case.

Stand-By Power Unit - $75,000

Although many of Massachusetts-American Water Company's well/pumping stations are equipped with stand-by power facilities, seven stations, including Accord Pond pump station and Hull booster station, are not able to be operated in the event of a power failure. This portable diesel powered generator will be utilized to provide stand-by power to the pumping/well station in the event of a longer term power failure.

Meters - Periodic-($75,000) and Pump Station - ($25,000)

The Hingham District has embarked on a meter replacement program that is a part of the DEP ACO whereby 2100 meters over ten years old will be, or have been, replaced during the period of August 1999 through December 2000. Although significant funds were expended toward the project prior to the close of the test year, $75,000 in additional capital expenditures will be invested by December 2000. In addition, the replacement of source water meters at the Scotland and Prospect Street wells is also a part of the ACO program and are included in the Company's pro forma investment total.

Customer Advances - $826,987

Oxford district's Mobil Oil water main project and the Harwood Street project as well as Millbury's Manor Drive project were all completed shortly after the year-end June 2000 test year. Thus, they are included as an addition to utility plant, as the customer advance was received during the test year, and is included in the balance for rate base purposes.

17. Q. MR. BOSSUNG, HAS MAWC CONDUCTED ANY OTHER CAPITAL OR MAINTENANCE PROJECTS THAT ARE INCORPORATED IN THIS RATE FILING?

A. Yes. The Hingham District Strawberry Hill distribution storage tank was painted in 1995 and thus, the annual amortization of the painting costs are included. Exhibit No. 2 Schedule 12 includes the normalization of the Turkey Hill tank and the Accord Pond tanks, both in the Hingham District. In addition, Exhibit No. 2, Schedule 11 details the normalized cost of thirteen (13) well cleanings and redevelopments. Five of these well maintenance projects have been conducted since the last rate case test year.

18. Q. ASIDE FROM THE MASSACHUSETTS DEP ADMINISTRATIVE CONSENT ORDER (ACO) INVOLVING THE HINGHAM DISTRICT, ARE THERE ANY OTHER ORDERS, AGREEMENTS OR STIPULATIONS WITH

MASSACHUSETTS AGENCIES THAT HAVE AN IMPACT ON THIS RATE PROCEEDING?

A. Yes, as a result of the Memorandum of Agreement (the Agreement) between the Massachusetts Department of Telecommunications and Energy (DTE) and the Department of Environmental Protection "regarding the setting of water rates for private water companies" dated December 24, 1998, and in order to comply with the requirements of a May 1999 settlement agreement resulting in the DEP's issuance of a Water Withdrawal Renewal Permit for the Millbury District, the Company is incorporating in this case a conservation rate structure that conforms to the intent of the Agreement. Mr. Steven Alcott will further address the particulars of the proposed conservation rate structure.

19. Q. REGARDING THE "OTHER SERVICES" CHARGES PORTION OF THE COMPANY'S PROPOSED TARIFF, IS MAWC PROPOSING TO REVISE IN THIS FILING ANY OF THE OTHER SERVICES CHARGES?

A. Yes, the Company proposes to increase by $5.00 the "turn on fee-business hours" to $20.00 and the "non-payment reconnect-business hours" to $20.00. In addition, the "Cross Connection-One Device testing" is proposed to increase $25.00 from $50.00 to $75.00 and "each additional device testing" increased $10.00 from $25.00 to $35.00. However, the "After Hours Call Out" and the "Non-Payment Reconnect-After Hours" are proposed to decrease $30.00 from $195.00 to $165.00. These proposed charges are more reflective of the projected labor overhead and transportation costs to be incurred as a result of the Company's provision of "Other Services."

20. Q. MR. BOSSUNG, DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes it does.